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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/098,726	03/15/2002	Chin Keong Ho	NUS1	3014
6980	7590	08/02/2005	EXAMINER	
TROUTMAN SANDERS LLP BANK OF AMERICA PLAZA, SUITE 5200 600 PEACHTREE STREET, NE ATLANTA, GA 30308-2216			BURD, KEVIN MICHAEL	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/098,726

Applicant(s)

HO ET AL.

Examiner

Kevin M. Burd

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-24 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-10 and 14 is/are rejected.
- 7) ☒ Claim(s) 4-6, 11-13, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Objections

1. Claims 5 and 6 are objected to because of the following informalities: the term "the frequency offset estimator" is recited in line 2 of claims 5 and 6. This term lacks antecedent basis. It is believed that claims 5 and 6 should be dependent on claim 3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Dubrovin et al (US 6,901,121).

Regarding claims 1-3, Dubrovin discloses a data communication receiver that receives data packets (column 1, lines 50-52). Offset estimators are coupled to the input (figure 4). A DC offset estimator detects and compensates for the DC offset (element 100). Nonlinear impairment detection and compensation block 102 receives the DC offset compensated signal (column 10, lines 1-13). The nonlinear impairments may be removed using any technique (column 10, lines 14-15). This will include estimating and removing voltage offsets due to gain mismatches.

Regarding claim 7-10, Dubrovin discloses a data communication receiver that receives data packets (column 1, lines 50-52). Offset estimators are coupled to the input (figure 4). A DC offset estimator detects and compensates for the DC offset (element 100). Nonlinear impairment detection and compensation block 102 receives the DC offset compensated signal (column 10, lines 1-13). The nonlinear impairments may be removed using any technique (column 10, lines 14-15). This will include estimating and removing voltage offsets due to gain mismatches and using as many estimators as is necessary to remove the mismatches.

3. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Nafie et al (US 2001/0033601).

Regarding claim 14, Nafie discloses a frequency offset estimator comprising an input for receiving data packets (abstract). The data packets have at least a dc and a frequency offset. Nafie discloses an input for receiving an estimate of the dc offset and an output for providing an estimate of the frequency offset (paragraphs 0018 and 0020).

Allowable Subject Matter

4. Claims 4-6, 11-13, 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 17-24 are allowed.

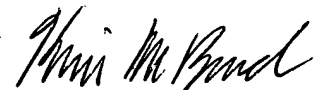
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mattisson et al (US 6,104,238) discloses a frequency offset estimator and direct current estimator shown in figure 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin M. Burd
7/30/2005

**KEVIN BURD
PRIMARY EXAMINER**